MICROMEDIA INTERNATIONAL

ALERT

Available Media Compatible Modems

2014/12/05

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Alert is able to send messages through different media

Telephone (desk or mobile)

Operators are called by telephone, can listen to alarms and acknowledge them, through the **ALERT** integrated vocal server.

Short messages (SMS), public paging systems

To alert mobile operators by the mean of their handy or pager.

Walkie-talkie radio

Useful media when a GSM network is not available.

On-site paging systems

To quickly alert maintenance operators working on site.

Voice and Text over IP (VoIP et ToIP)

Transmit messages to IP Phones or through compatible PABX (SIP compatible). No modem is needed anymore.

Fax, teleprinter

To transmit written reports about detected alarms and their context.

Alert Mobile

Visualize and acknowledge alarms with SMS, 3G or Wifi connection. (Smartphone Android , Blackberry, iPhone)

Email

To transmit written reports about detected alarms and their context.

ANDROID BlackBerry iPhone

Remote monitoring

Relay alarms information to your remote monitoring center using either the TRSII, SIA or ContacID protocols

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For each modem, its usable media

Modems	Advantages/Drawbacks	Media
Digital/ISDN	Reliable and long-lasting product Only available in PCI or PCIe	Vocal Alarms, Mini-messages, Fax, public pager, Data for remote monitoring center (TRSII protocol)[1]
Analog/PSTN	Unreliable and short-lasting product, vocal feature abandoned by constructors	Vocal Alarms, Fax, Data for public pagers Data for private pagers, Data for remote monitoring center (SIA, TRSII protocol)
GSM[2]	Reliable and long-lasting product, constant evolutions brought by the constructors	Vocal Alarms[3] and SMS only[4]

Beware:

- Digital/ISDN modems can only be used on digital/ISDN phone lines
- Analog modems can only be used on analog/PSTN phone lines

1 - Be sure that the remote monitoring center accepts connections from ISDN modems
2 - The sim card and the telecom service provider subscription are not provided by Micromedia International
3 - Vocal alarms through GSM modem are only available on specific GSM modems delivered by Micromedia International
4 - Currently with Alert software, GSM modems cannot send emails nor fax

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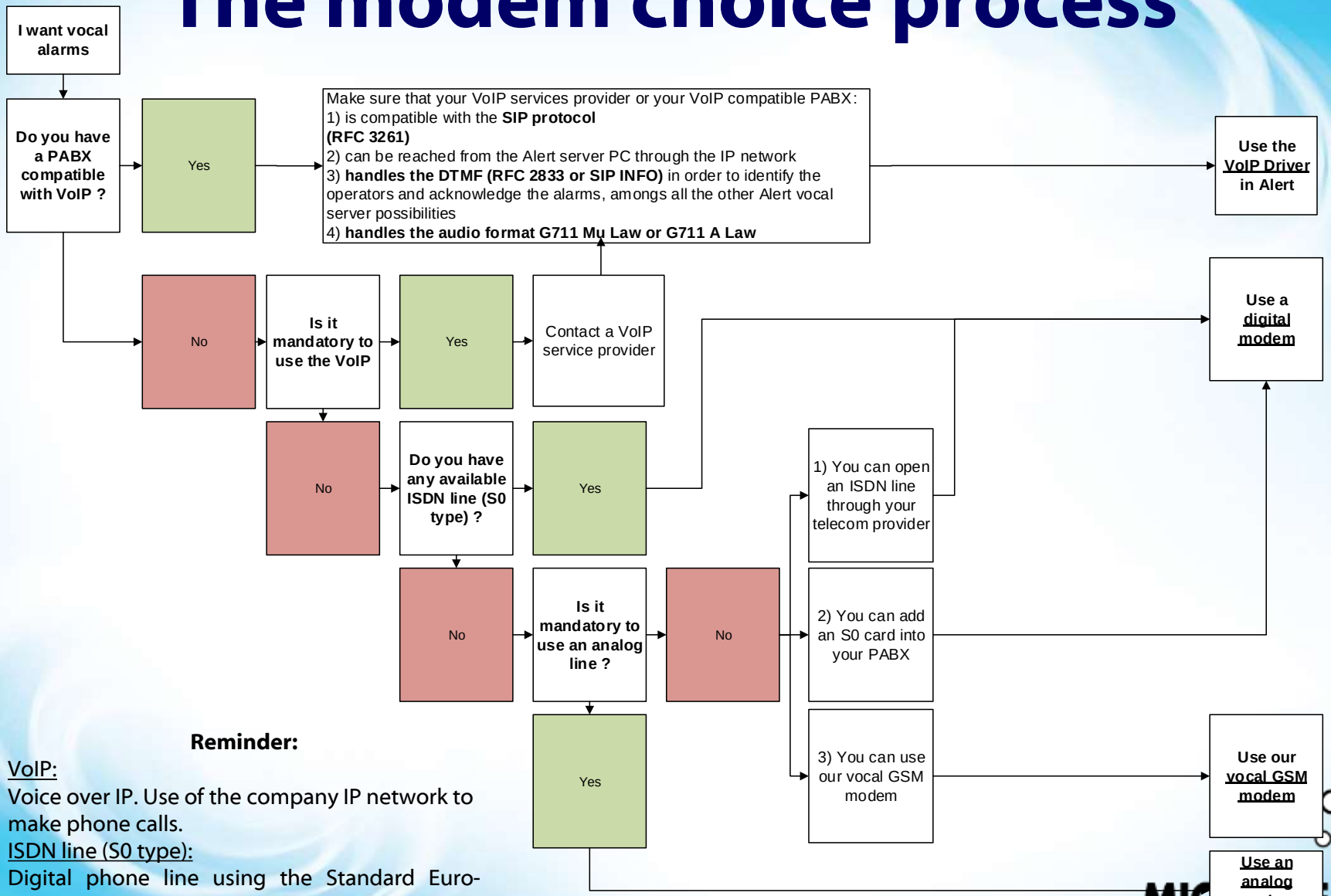
For each medium, a modem 1/2

Medias	Required modem	Benefits	Drawbacks	Supported protocol	Remarks
Vocal (digital phone line)	Digital modem	Reliability: You are sure that the operator has listened to the alarm message		S0	S0 basic access : Standard Euro-ISDN (ETSI standard), in point to multipoint mode.
Vocal (analog phone line)	Analog modem	Reliability: You are sure that the operator has listened to the alarm message	Potential phone line pick up and hang up issues		
Vocal (using VoIP)	None, but an IP network connection	No modem required. Reliability: You are sure that the operator has listened to the alarm message	PABX compatible with SIP protocol (RFC 3261) and DTMF handling. Otherwise use of a compatible VoIP service provider	SIP	Audio formats handled: G711 Mu Law, G711 A Law DTMF management supported: RFC 2833, SIP INFO
Vocal (using our vocal GSM modem)	GSM modem (from Sierra Wireless). Specific firmware and application provided by Micromedia is needed.	A single equipment without any physical phone line to send vocal alarms AND SMS. Reliability: You are sure that the operator has listened to the alarm message			GSM signal has to be strong enough where the modem is located. The SIM card and the mobile phone subscription are not provided by Micromedia.
SMS	GSM modem		The mobile phone provider does not guarantee the reception of the SMS by the receiver. Optionally, in Alert, it is possible to know if the recipient has received the SMS but not if the recipient has actually read it.		GSM signal has to be strong enough where the modem is located. The SIM card and the mobile phone subscription are not provided by Micromedia All subscription which can send SMS will work. The 'DATA' subscription will be appropriate if only sending SMS (no vocal alarms).
Fax	Digital or analog modem				

For each medium, a modem 2/2

Medias	Required modem	Benefits	Drawbacks	Supported protocol	Remarks
Email	Analog modem, digital modem or IP network connection				A RAS predefined connection in Windows is needed when using analog or digital modem. SSL encryption is not supported.
Mini-messages (over ISDN)	Digital modem	Free. Generic, works on any telecom infrastructure. Standard protocol.	Restricted to company internal use. Only to be used by phones with text displays compatible with mini-messages (ex: DECT). The mini-messages protocol is not always supported by the PABX	S0	S0 basic access : Standard Euro-ISDN (ETSI standard), in point to multipoint mode. See focus on slides 7-8
Public pagers	Digital or analog modem	Large coverage: world, underground,…	Future of such media is not secured.	TAP,ERMES UCP	
Mini-messages to DECT phones, Private pagers, beeps	None. Serial or an IP network connection	Fastest way to send alarms.Once installed, messaging is free. The installation can cover specific premises which have no GSM signal (underground,…)	Local coverage: limited to the area covered by private antennas	ESPA 444, DAKS, Alcatel, Alcatel OXE, NIRA, ASCOM, IXARMA, Cisco XML compliant phone , Quentris, Spectralink	See focus on slides 7-8
AlertMobile	GSM modem ou IP network connection	Enables multi-sites supervision using 3G, Wifi or SMS		3G, Wifi, SMS	
Walkie-Talkie	Motorola or Kenwood interface box. Contact Micromedia International.	Large coverage area with one single radio antenna.			

Vocal alarms focus
The modem choice process



Reminder:

VoIP:
Voice over IP. Use of the company IP network to make phone calls.

ISDN line (S0 type):
Digital phone line using the Standard Euro-ISDN, in point to multipoint. Norme ETSI.

Text mini-messages focus 1/2

- Text messages can only be sent to phones of a given site supporting text messages. They are generally used in internal networks with a short range, less than 3 km. **This is not SMS.** SMS are mini-messages text which use national or international GSM telecommunication providers (wide public area).
- The phones receiving the text alarms **must be compatible with mini-messages text** and compatible with the PABX sending the text messages. These phones may be DECT or not. The phone model will determine if it is compatible with the reception of mini-messages text.
- Knowing the PABX type will determine which driver Alert will use to send the mini-messages text :
  - « mini-message over ISDN » feature: Feature included by default with the ISDN standard. Free driver. Constraint : use of a digital modem (S0 basic access) connected to the Alert server and a digital line between the modem and the PABX. The text message is not directly displayed on the phone screen, one has to navigate through the phone menu to display the message.
  - Use of the ESPA444 protocol between the Alert server and the PABX (or its associated alarm central*). Free driver. Constraint : Serial connection (RS-232) to the PABX (or its associated alarm central*) and no alarm or call acknowledgment possibility. The PABX (or its associated alarm central*) must handle the ESPA444 protocol in input.
  - Use of specific driver dedicated to the PABX. drawback : paid driver. Main advantages are :
    - No modem needed to send text messages. Most of the time an IP link is used between Alert and the PABX.
    - A short text message is displayed directly on the phone. You don't have to navigate through all your phones menus
- The current available driver list can be seen on the next page.
- You get the list from here:

  List of all Alert drivers

* Alarm central: external module provided by the constructor of the PABX. For example: M7900 for Matra, HiPath DAKS for Siemens, …

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Text mini-messages focus 2/2

Driver	Required hardware	Connection type between Alert and the required hardware	Acknowledgment management: On server receipt On phone receipt On operateur reading action	Driver licensing policy	Remarks
Mini-message over ISDN	S0 digital line	S0	Ack on server receipt Ack on phone receipt. Manual call ack possible	Free	Possible when using digital line whatever the PABX is.
ESPA444	PABX or alarm central handling ESPA444 input	RS-232	Ack on server receipt Ack on phone receipt. No manual call ack possible	Free	Many PABX or alarm central support this protocol
Alcatel 4400	Notification Server (Windows NT machine)	IP	Ack on server receipt Ack on phone receipt. No manual call ack possible	Free	Obsolete.:Alcatel does not support this installation type anymore
Alcatel OXEPaging	PABX Alcatel OXE (≥5.0) With Notification Server option ≥ 50	IP on port 2555	Ack on server receipt Ack on phone receipt. Manual call ack possible	Charged	
Aastra	PABX Aastra IntelliGate Version ≥ I6.6 with license ATAS.	IP	Ack on server receipt Ack on phone receipt. Manual call ack possible	Charged	Installation done with Aastra 2065 release 7.51
EricssonCTI	Ericsson CTI	IP	Ack on server receipt Ack on phone receipt. No manual call ack possible	Charged	
Ascom OAS	Ascom OAS card	IP	Ack on server receipt Ack on DECT and beep. Manual call ack possible	Free	
Ascom OAP	IMS card handling the OAP protocol	IP	Ack on server receipt Ack on DECT only. Manual call ack possible	Free	Cannot send text message to beep. Text messages to DECT only.
Cisco XML	Cisco Call Manager Version ≥4	IP	Ack on server receipt Ack on phone receipt. No manual call ack possible	Charged	
DAKS TR500	Siemens DAKS-TR500	IP	Ack on server receipt Ack on phone receipt. No manual call ack possible	Free	

Focus on sending alarms to telemonitoring centers

Driver	Required hardware	Communication medium type	Driver licensing policy	Remarks
TRSII	Analog modem Digital modem	Analog/PSTN phone line Digital/ISDN phone line	Charged	Protocol originally used with « Clips » equipment, from WIT company. With a digital modem, please make sure the telemonitoring center accepts connections coming from such modem.. For the driver configuration you will need : 1) The telemonitoring center's MONET phone number Alert will have to dial 2) The site ID provided to you by the telemonitoring center
PC-TEXTE	Analog modem	Analog/PSTN phone line	Free	
SIA (SIA on Analog/PSTN phone line)	Specific SIA Modem (provided with driver)	Analog/PSTN phone line	Charged	SIA DC-03 used
SIA (Contact ID on Analog/PSTN phone line)	Specific SIA Modem (provided with driver)	Analog/PSTN phone line	Charged	SIA DC-05 used ADM-CID (Ademco® Contact ID) format used
SIA (SIA/Contact ID on IP)	IP interface	IP	Charged	SIA DC-07 (not crypted) SIA DC-09 (crypted) SIA-DCS or ADM-CID (Ademco ® Contact ID) formats used An IP access from Alert to the telemonitoring center is mandatory.

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Frequently Asked Questions

The GSM signal is weak where my GSM modem is located, what should I do ?

You have 2 options

1) The extension of the GSM antenna cable

Depending on the cable shield, the GSM antenna can be deported several meters away (up to 30 meters or more)

2) The RS-232/IP or USB/IP converter

We have tested several RS-232/IP and USB/IP converters. With this type of converters, you will be able to install the GSM modem on the same IP network as the Alert server, but at a place where the GSM signal is stronger. You will then be able to use the GSM mode as if it was next to the Alert server.

The Micromedia International application will be installed on a virtual machine, is it possible ?

Yes, Micromedia International applications may be installed on virtual servers. However, this type of architecture implies to comply with some restrictions regarding the communication equipments.

In a virtual machine environment, USB and RS-232 physical ports can be assigned to specific virtual machines. If you cannot achieve this procedure, **the use of equipment dedicated to Micromedia International applications should be done through the use of an IP network connection**. You will then have to use a **USB/IP or RS-232/IP converter**.

If you want to send alarm vocal calls, we recommend the use of **VoIP**. This feature enables you to emit vocal calls through the IP network. If your infrastructure is not compatible with VoIP, a modem is needed. A **RS-232/IP or USB/IP converter can be used** to access your modem through your IP network.

Find answers to other questions on our web site in the FAQ section.

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In a nutshell

Modems / Send alarms	Analog	Digital	GSM
Vocal	Yes	Yes	Yes[3]
Data (Fax, pager, TRSII[1])	Yes	Yes[1]	Impossible
SMS	Impossible in France[2]	Impossible in France[2]	Yes
Email	No[4]	No[4]	No

1 – The TRSII driver enables transmitting of alarms to remote monitoring centers.
Be sure that the remote monitoring center accepts connections from ISDN modem
2 – Possible outside of France through telecom provider servers (TAP or ERMES UCP protocol)
3 – Possible since Dec. 2011, with our specific vocal GSM modem provided by Micromedia International
4 – A « Remote Access Service » must be defined in Windows in order to have a permanent access to a SMT server. In this use case, the modem will not be able to send any other type of alarms (vocal calls, fax…)

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Connection types and prices

Modem type	Connection type	Prices
Digital modem card (up to 2 simultaneous calls on 1 ISDN physical line)	PCI, PCI-Express	From ~ 200 € to ~800 €
Digital modem card (up to 4 simultaneous calls on 2 ISDN physical lines)	PCI, PCI-Express	~1600 €
Digital modem card (up to 8 simultaneous calls on 4 ISDN physical lines)	PCI, PCI-Express	~ 2100 €
Analog modem box (1 call on 1 PSTN physical line)	RS-232, USB	~ 300 €
Analog modems card (up to 2 simultaneous calls on 2 PSTN physical lines)	PCI, PCI-Express	~ 950 €
Vocal GSM modem (Vocal calls and SMS only, 1 SIM card)	RS-232, USB	~ 600 €

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Technical telecom glossary

- **B Channel** — The bearer channel (B) is a standard 64 kbit/s voice channel of 8 bits sampled at 8 kHz with G.711 encoding. B-Channels can also be used to carry data, since they are nothing more than digital channels.
- **BRI** — The entry level interface to ISDN is the Basic Rate Interface (BRI), a 144 kbit/s service delivered over a pair of standard telephone copper wires. The 144 kbit/s rate is broken down into two 64 kbit/s bearer channels ('B' channels) and one 16 kbit/s signaling channel ('D' channel or Data channel). BRI is sometimes referred to as 2B+D. BRI-ISDN is very popular in Europe but is much less common in North America
- **Interface T0** — Interface de l'accès de base côté réseau public.
- **ISDN** —Integrated Services Digital Network. Integrated Services refers to ISDN's ability to deliver at minimum two simultaneous connections, in any combination of data, voice, video, and fax, over a single line
- **PABX or PBX**— Private Automatic Branch eXchange.
- **S interface** — The S interface is a four-wire bus that ISDN consumer devices plug into
- **T interface** — The T interface is a serial interface between a computing device and a Terminal Adapter, which is the digital equivalent of a modem.

To know more

Micromedia International tested and validated modems :

- Modems list

Micromedia International FAQ section:

- FAQ section

Wikipedia:

- ISDN http://en.wikipedia.org/wiki/ISDN
- PBX/PABX http://en.wikipedia.org/wiki/Private_branch_exchange

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Thank you

Do you have questions?

Don't hesitate to contact us

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